3. (Amended) A permanent magnet type reluctance electric motor according to claim 1, wherein the cavities arranged in the q-axis direction extend through to an outer circumferential portion in a radial direction of the rotor.

a11

4. (Amended) A permanent magnet type reluctance electric motor comprising:

a stator including a stator iron core and having armature coils placed inside slots; and

a rotor provided with a plurality of magnetic barriers formed by cavities and placed on an inner side of the stator in such a manner that sections where a magnetic flux can easily pass (d-axis) and sections where a magnetic flux cannot easily pass (q-axis) are alternately formed, and made of a rotor iron core having permanent magnets in cavities,

wherein the rotor satisfies a relationship of:

$W_{dmin}P/2\pi R \geqq 65$,

where W_{dmin} (m) indicates a minimum distance between a cavity arranged in the q-axis direction and a permanent magnet, P indicates the number of poles and R (m) indicates the radius of the rotor.

a12

6. (Amended) A permanent magnet type reluctance electric motor comprising:

a stator including a stator iron core and having armature coils placed inside slots; and

a rotor provided with a plurality of magnetic barriers formed by cavities and placed on an inner side of the stator in such a manner that sections where a magnetic flux can easily pass (d-axis) and sections where a magnetic flux cannot easily pass (q-axis) are alternately formed, and made of a rotor iron core having permanent magnets in cavities,

wherein the rotor satisfies a relationship of:

$110 \leqq W_{dave} P/2\pi R \leqq 150$,

where W_{dave} (m) indicates an average distance between a cavity arranged in the q-axis direction and a permanent magnet, P indicates the number of poles and R (m) indicates the radius of the rotor.

10. (Amended) A permanent magnet type reluctance electric motor comprising:

a stator including a stator iron core and having armature coils placed inside slots; and

a13

a rotor provided with a plurality of magnetic barriers formed by cavities and placed on an inner side of the stator in such a manner that sections where a magnetic flux can easily pass (d-axis) and sections where a magnetic flux cannot easily pass (q-axis) are alternately formed, and made of a rotor iron core having permanent magnets in cavities,

wherein the rotor satisfies a relationship of:

$0.45 \leqq W_t/\tau \leqq 0.8$,

where τ (m) indicates the pitch of the slot and W_t (m) indicates the width of the teeth.

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-11 are pending in the present application with Claims 1, 3, 4, 6 and 10 having been amended by the present amendment.

In the outstanding Office Action, the disclosure was objected to; the drawings were objected to; Claim 10 was rejected under 35 U.S.C. §112, first paragraph; Claims 1-3, 10 and 11 were rejected under 35 U.S.C. §103(a) as unpatentable over Sakai et al (U.S. Patent No. 6,274,960); Claims 4-7 were rejected under 35 U.S.C. §103(a) as unpatentable over Uchida et al; and Claims 8 and 9 were rejected under 35 U.S.C. §103(a) as unpatentable over Sakai et al in view of Sakai (U.S. Patent No. 6,087,751).

Regarding the objection to the disclosure, the specification has been amended in light of the comments noted in the outstanding Office Action and as shown in the marked-up copies. Accordingly, it is respectfully requested this objection be withdrawn.